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WA0XK-F

POWER METER SET

1. GENERAL. This procurement requires an RF peak power measuring set.

2. CLASSIFICATION. Type II, Class 5, Style E, and Color R in accordance with MIL-T-28800 for shipboard applications.

3. MEASUREMENT CAPABILITY. The equipment shall be capable of measuring peak power at the center of a specific pulse in a pulse train, and the pulse width at the 3 dB points of a pulse envelope, within the minimum frequency and power ranges, and with the modulation characteristics specified below.

3.1 Modulation. The equipment shall be capable of measuring signals with RF modulation rates of 25 pps to 10,000 pps, and with pulse widths of 1.0 us to 1 ms.

3.2 Power meter. An analog indicating meter with a taut-band movement and mirror-backed scales or a digital indicating display with a resolution of 3-1/2 digits shall be provided.

3.2.1 Resolution. 2% of full scale.

3.3 Trigger. The equipment shall have internal and external trigger modes.

3.3.1 Trigger delay range. 0 to 200 ms. Resolution: 0.1 ns. Accuracy: ±(0.01% of delay + 1 ns).

3.3.2 External trigger. Level: TTL. Connector type: BNC(f).

3.4 Calibration factor control. A calibrated control that permits compensation for the frequency response of the power sensor is required.

3.5 Power sensor.

3.5.1 Frequency range. 100 MHz to 18 GHz.

3.5.2 Peak power range. -20 dBm to +20 dBm.

3.5.3 Overload protection. 200 mW peak.

3.5.4 Voltage standing wave ratio (VSWR). 1.15 from 100 MHz to 2.0 GHz, 1.25 from 2.0 to 12.4 GHz, and 1.4 from 12.4 to 18.0 GHz.

3.5.5 Connector. Type N(m).

3.5.6 Interconnecting cable length. 1.2 meters (4 ft).

3.5.7 Calibration factor graph. The power sensor shall be provided with a graph of calibration factor versus frequency mounted on the power sensor housing. The graph shall be compatible with the control specified in 3.3.

3.6 Accuracy. ±10% of full scale.

3.7 Output. The equipment shall have an output proportional to the detected RF envelope. R isetime: 50 ns or less. Impedance: 50 ohms, nominal.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 nominal power source requirements are invoked. Maximum power consumption: 40W.

4.2 Weight. 20 kg (44 lb) maximum.

4.3 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.